

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A catheter and guide wire exchange system comprising:

an elongate flexible catheter shaft having proximal and distal shafts ~~and first and second lumens extending there through, the first lumen being open at the catheter distal end and being sized and shaped to slidably receive a guide wire,~~ the proximal shaft contains a tri lumen arrangement of tubes defining a first guide wire lumen and first inflation lumen and a stiffening wire lumen, the distal shaft contains a coaxial arrangement of an inner tube defining a second guide wire lumen and an outer tube surrounding the inner tube thereby defining second inflation lumen;

a longitudinal guide way formed in the proximal shaft to enable transverse access to the first guide wire lumen through the proximal shaft, the guide way extending along a major portion of the length of the proximal shaft from a location adjacent a proximal end of the proximal shaft to a distal terminal end proximal of a distal end of the proximal shaft, thereby defining an uncut distal segment of the proximal shaft;

a stop located on the proximal shaft at the distal terminal end of the guide way;

a speed bump located on the proximal shaft proximal of the stop;

a balloon mounted about a distal segment of the distal shaft, the balloon being in fluid communication with the second inflation lumen;

a guide member mounted on the proximal shaft and having a catheter passageway extending there through for slidably receiving the catheter shaft and a guide wire passageway for slidably receiving the guide wire for merging the guide wire and the catheter by guiding the guide wire transversely through the guide way and into the first guide wire lumen and for separating the guide wire and catheter by guiding the guide wire transversely out of the first guide wire lumen through said guide way; and

a transition segment between the proximal shaft and the distal shaft, the transition segment comprising the proximal shaft having a cut back section adjacent the first guide wire lumen at its distal end and a non cut back section at its distal end, ~~the distal shaft having an outer tube and an inner tube~~, the distal shaft outer tube abutting the proximal shaft at the cut back section and overlapping the non cut back section of the proximal shaft distal end and the distal shaft inner tube inserted in the first guide wire lumen in the proximal shaft.

Claim 2 (amended): The catheter and guide wire exchange system of claim 1, wherein the guide member has at least one keel disposed within the catheter passageway and being adapted to open and to protrude through the guide way into the first guide wire lumen.

Claim 3 (amended): The catheter and guide wire exchange system of claim 1, wherein the guide wire passageway extends through a tubular member extending into the catheter passageway and being shaped and sized to fit within the first guide wire lumen.

Claim 4 (amended): The catheter and guide wire exchange system of claim 1, wherein the first guide wire lumen has a ramp adapted to receive and direct a guide wire proximal end through the guide wire passageway.

Claim 5 (amended): The catheter and guide wire exchange system of claim 1, wherein the first guide wire lumen has a recess adapted to receive and direct a guide wire proximal end through the guide wire passageway.

Claims 6-7 cancelled

Claim 8 (amended): The catheter and guide wire system of claim [7] 1 wherein the inner tube includes a connecting tube segment positioned between the distal shaft inflation lumen and the proximal shaft inflation lumen, the connecting tube segment having a proximal end for insertion into the first inflation lumen ~~of the proximal shaft~~.

Claim 9 (original): The catheter and guide wire exchange system of claim 1 wherein the balloon is a stent delivery balloon.